would do that until such time as [11] the company performing its business plans and [12] determines where they are going to invest in [13] facilities, and then replace those facilities that [14] you're purchasing with your own.

[15] **Q:** I understand. Even in that case, you [16] don't — I just want to distinguish that, until the [17] CLEC actually puts in facilities, we don't have [18] facilities-based competition; correct?

[19] **A:** Well, you do. By purchasing unbundled [20] network elements at cost-based forward-looking [21] costs, CLECs have the ability to compete on price [22] and to also manipulate their service offerings.

[23] In resale you're totally dependent on [24] Bell Atlantic's product and any product that they

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[1] roll out. We can't product-differentiate. There's [2] just no way. This way you could.

[3] **Q:** I understand that point. I think I'm [4] really just dealing with a narrow issue here, which [5] comes out of your statement that with the UNE [6] platform — that the UNE platform permits [7] facilities-based competition. All I'm saying is, [8] if one defines the UNE platform as the soup-to-nuts [9] combination of link through whatever is required to [10] provide total service, by definition it appears to [11] me to be not facilities-based competition.

[12] **A:** Perhaps I shouldn't have used the word [13] "platform."

[14] **Q:** I understand the case you're making that [15] where one or another UNE is combined with the [16] CLEC's own facilities, then we have a greater [17] element of facilities-based competition.

[18] **A:** Correct.

[19] **Q:** But I was trying to distinguish that [20] between the UNE-platform definition that I've heard [21] before.

[22] **A:** There are some other issues with regard [23] to offering unbundled network elements and resale, [24] such as the back-office support and the OSS systems

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[1] that have to be developed for each. MCI, because [2] we have chosen to be a facilities-based carrier, [3] our business strategy is all geared in that way. [4] So when we develop OSS's, we're going to develop [5] them to purchase UNEs. In many cases the OSS is [6] different than it is for resale.

[7] So you're making that investment one [8] time, hopefully, for your OSS, whereas it would be [9] a sunk cost if you were doing it the other way. If [10] you were resale and UNEs at the same time, that [11] would make no sense strategically.

[12] **MR. LEVY:** Mr. Beausejour, do you [13] have any questions?

[14] **MR. BEAUSEJOUR:** Yes, I do, Mr. [15] Levy.

[16] **CROSS-EXAMINATION**

[17] **BY MR. BEAUSEJOUR:**

[18] **Q:** Good afternoon, Ms. Guariglia.

[19] **A:** Good afternoon.

[20] **Q:** Am I correct that MCI's position [21] essentially is that the Department should order [22] Bell Atlantic to provide combinations of network [23] elements?

[24] **A:** Yes, it is.

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[1] **Q:** Let's assume for the moment that the [2] Department does not order Bell Atlantic to combine [3] UNEs for the CLEC. Does MCI have a proposal for [4] how MCI would obtain access to individual unbundled [5] network elements so that MCI could combine them for [6] itself?

[7] **A:** If you're asking me if MCI has an [8] alternative to this proposal, no, we do not, [9] because we have not found a proposal that is as [10] efficient. It's incomprehensible, at least to me [11] and my company, that we would introduce additional [12] steps in the provisioning of local service to our [13] end-user customers, because all that really [14] accomplishes is it increases costs and increases [15] additional points of potential failure. That [16] inherently just doesn't make much sense.

[17] **Q:** So MCI has no proposal in the event that [18] the Department does not order Bell Atlantic to [19] provide UNE combinations.

[20] **A:** No, we do not.

[21] **Q:** On Page 3 of your supplemental system, [22] MCI Exhibit No. 2, you make a statement at Line 11 [23] that collocation adds absolutely nothing to the [24] ability of MCI to connect UNEs like loops to its

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[1] own physical network but does discourage [2] facilities-based competition.

[3] If MCI wants access to Bell [4] Atlantic's local loops so it can connect to its [5] switch, how would MCI obtain access to those local [6] loops other than by collocating?

[7] **A:** We would request that Bell Atlantic [8] combine loop and transport, and we would transport [9] it back to our switch.

[10] **Q:** So in no instance would MCI have a need [11] to collocate in that scenario with Bell Atlantic?

[12] **A:** Correct.

[13] **Q:** And the loop and transport that MCI is [14] looking for, that is in itself a combination; [15] correct?

[16] **A:** Correct.

[17] **Q:** How is the loop and transport that MCI is [18] seeking from Bell Atlantic different from the Bell [19] Atlantic extended-link proposal?

[20] **A:** If I recall correctly, the extended-link [21] proposal did require one point of collocation per [22] LATA, physical collocation. It also did not offer [23] concentration of traffic. And MCI would have to [24] incur additional costs for transport. Aside from

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[1] that, this is a limited-time offering. limited- [2] time promotion, sale.

[3] **Q:** You mentioned it would require MCI to [4] have one point of collocation per LATA.

[5] **A:** That was my understanding.

[6] **Q:** Doesn't MCI already have multiple points [7] of collocation in each of the Massachusetts LATAs?

[8] **A:** I can't estimate how many points of [9] collocation we do have. But what I can say is that [10] requiring us to collocate prohibits competition, [11] because it's not based on any business plan that we [12] have. We might choose to collocate in certain [13] instances, but that would be based on a [14] comprehensive business plan.

[15] **Q:** Would you agree, subject to check, that [16] MCI already has multiple collocation sites in each [17] of the Massachusetts LATAs?

[18] **A:** Okay.

[19] **Q:** And so that in the instance where MCI has [20] those sites, there is no additional cost to MCI [21] associated with Bell Atlantic's extended-link [22] proposal?

[23] **A:** I don't know that that's true, because I [24] don't know what that additional transport would

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[1] cost.

[2] **Q:** Well, under your proposal, where we [3] deliver it directly to your switch, there would be [4] some transport from each of the end offices, [5] wouldn't there?

[6] **A:** Yes, there would be.

[7] **Q:** How is that transport any different from [8] the transport under Bell Atlantic's proposal?

[9] **A:** We would really have to look at it on a [10] case-by-case basis to determine the cost. If [11] you're asking if they equal the costs, I don't [12] know.

[13] **Q:** But you criticize Bell Atlantic's [14] extended-link proposal because it has additional [15] transport costs; correct?

[16] A: The proposal is that all the transport [17] would go into one collocation place, one point per [18] LATA, and then we would have to transport all that [19] traffic back to our switch, wherever it was. So we [20] could be going from left to right and down and [21] around, instead of — we could be doing a complete [22] U-turn, to quote Mr. Falcone, instead of a direct [23] shot.

[24] Q: How is delivering extended link to MCI's

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[1] switch in Boston any different than delivering it [2] to a single collocation node, say, in downtown [3] Boston?

[4] A: Could you repeat that, please?

[5] MR. BEAUSEJOUR: Could you read the [6] question back, please.

[7] (Question read.)

[8] A: Let me answer this question a little [9] differently. We might not opt to transport from [10] the northern part of the state to our switch in [11] Boston if it's not economical. I mean, in [12] situations like that we may opt to purchase the [13] unbundled switching network from Bell Atlantic.

[14] Q: But I'm just saying, what MCI wants for [15] extended link versus what Bell Atlantic has [16] proposed for extended link. You criticize our [17] proposal because of the transport. How is it any [18] different from what MCI's proposal is? I don't [19] understand the difference.

[20] A: We didn't say we wanted extended link.

[21] Q: You don't want extended link?

[22] A: We didn't say that that was what we [23] wanted. What we're saying is, we wouldn't want to [24] purchase every unbundled network element.

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[1] Q: Well, isn't extended link a combination [2] of the loop UNE and the transport UNE?

[3] A: Correct.

[4] Q: And isn't that a combination that MCI [5] would like to purchase?

[6] A: In some instances, yes.

[7] Q: So they do want to purchase whatever you [8] call it, something like an extended link.

[9] A: If that's what it is, yes.

[10] Q: I'm just trying to focus on what about [11] Bell Atlantic's extended-link proposal MCI finds [12] offensive. That's the only purpose for the [13] question. You've identified two: one point of [14] collocation and no concentration. Correct?

[15] A: Correct, especially for voice-grade [16] analog links.

[17] Q: Now, on the one point of collocation, MCI [18] has multiple collocations, so that isn't a problem, [19] is it?

[20] A: I couldn't say. That would have to be —[21] we'd have to examine that on a case-by-case basis. [22] I can't make a blanket statement like that.

[23] Q: Now, with respect to the issue of [24] concentration, that relates to your proposal that

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[1] the transport be provided over digital-loop carrier [2] with GR-303 capability?

[3] A: Correct.

[4] Q: Do you know whether Bell Atlantic has a [5] single GR-303 system deployed in Massachusetts?

[6] A: I personally do not have that knowledge.

[7] Q: Let's assume for purposes of this [8] discussion that Bell Atlantic has no GR-303 [9] interoffice transport systems in place in [10] Massachusetts. What would MCI propose then for the [11] transport?

[12] A: Well, MCI wants some sort of [13] concentration. GR-303 — and I'm assuming that [14] Bell Atlantic does use some form of concentration. [15] If I'm not mistaken, it's TR-008. I think it's [16] just a difference of degree. GR-303 is a [17] six-to-one concentration ratio. Other forms of [18] concentration are two-to-one. It's just the most [19] forward-looking, most efficient way to concentrate [20] traffic. Other CLECs have opted to use that, such [21] as Cincinnati Bell — ILECs, excuse me.

[22] Q: But in the event that Bell Atlantic does [23] not have the digital-loop carrier equipment with [24] GR-303 capability deployed in its interoffice

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[1] network, would you then be satisfied with Bell [2] Atlantic's proposal for extended link?

[3] A: No, we would not.

[4] Q: What would you then propose?

[5] A: I don't know what we would propose.

[6] Q: Would you propose that Bell Atlantic [7] purchase and install a digital-loop carrier with [8] 303 capability on behalf of MCI?

[9] A: Yes, I think we would.

[10] Q: And MCI would be agreeable to paying the [11] full cost for the purchase price, full price of our [12] installing that equipment for MCI?

[13] A: I don't know.

[14] Q: Why would you be hesitant about not [15] wanting to pay the full cost of the purchase of the [16] equipment, full cost for installation?

[17] A: I'd have to take a look. To the extent [18] that it upgrades Bell Atlantic's network as well, I [19] don't see why we would bear full cost for it.

[20] Q: Well, if the equipment is dedicated [21] solely to MCI in that instance.

[22] A: I don't know. I'd have to look at that.

[23] Q: As opposed to our purchasing the [24] equipment and installing it on your behalf, would

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[1] you have a problem with a virtual collocation for [2] that type of equipment so that it could serve MCI?

[3] A: I don't understand the benefits of [4] virtual collocation, honestly. It looks like [5] physical collocation to me. I don't know what the [6] difference is.

[7] Q: On Page 4 of your supplemental testimony, [8] Line 1, beginning on Line 1, you indicate some of [9] the problems with combining UNEs via physical [10] collocation. Is that correct?

[11] A: That's correct.

[12] Q: One of them you mention is that it may [13] make it impossible to accomplish testing of the [14] UNEs. Do you see that reference? That's on Lines [15] 3 and 4.

[16] A: Correct.

[17] Q: Upon what do you base that statement?

[18] A: On the multiple cross-connections that [19] are installed. I mean, it just makes it that much [20] more difficult to track a problem when you have to [21] check various places.

[22] Q: So that the testing is affected by the [23] number of cross-connects, in your understanding.

[24] A: That's my understanding.

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[1] Q: Did you check with any MCI engineer for [2] the purpose of preparing your testimony on this [3] point?

[4] A: I have consulted with various experts at [5] MCI, yes.

[6] Q: For the purpose of preparing your [7] statement?

[8] A: Yes.

[9] Q: If I could refer to you AT&T Exhibit [10] No. 2, the Figure 1 that we've been dealing with.

[11] A: Okay.

[12] Q: What is your understanding of where the [13] link UNE terminates in a Bell Atlantic central [14] office?

[15] A: I believe Mr. Falcone testified the same [16] way. It's at the line side of the MDF.

[17] Q: So on this picture it is the block [18] entitled Line Side.

[19] A: At the line side at the MDF, yes.

[20] Q: And what is your understanding of where [21] an individual UNE port terminates?

[22] A: At the switch, I believe, or at the [23] switch side of the MDF.

[24] Q: So it's either —

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[1] A: It's the switch side of the MDF.

[2] Q: So on this figure it is the block [3] entitled Switch Side.

[4] A: That's my understanding, yes.

[5] Q: On Page 23 of your direct testimony you [6] have a chart at the top portion of the page that [7] lists various alternatives. Do you have that?

[8] A: Yes, I do.

[9] Q: You indicate on Line 7 that the CLEC's [10] access to the RCMAC system, you note that it's not [11] available now and undefined. What's the basis for [12] your understanding that it's not available and [13] undefined?

[14] A: For use by the CLEC. We don't know that [15] it's in use now. I haven't seen it done myself, [16] personally. We are now currently investigating and [17] researching what RCMAC does. But at the time of [18] that testimony, I had no knowledge of that.

[19] Q: On Page 16 of your testimony, direct [20] testimony, on Line 19, you state, "There are tens [21] of thousands of nonrecurring charges that [22] BA-Massachusetts imposes as part of collocation." [23] Do you see that reference?

[24] A: Yes.

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[1] Q: You'd agree with me, wouldn't you, that [2] it's a bit of hyperbole on your part?

[3] A: I would agree with that, yes. I would [4] have rather put "millions and millions."

[5] Q: Would you agree that millions and [6] millions would be a little bit of hyperbole on your [7] part?

[8] A: Yes.

[9] Q: And you have a familiarity with the [10] collocation charges that Bell Atlantic has proposed [11] in Massachusetts, don't you?

[12] A: At a high level, yes.

[13] Q: And it's not even close to tens of [14] thousands.

[15] A: I don't think it's tens of thousands.

[16] MR. BEAUSEJOUR: Mr. Levy, I have [17] nothing further.

[18] MR. LEVY: Any redirect?

[19] MS. BARBULESCU: Could I have a [20] moment, please?

[21] MR. LEVY: Sure.

[22] (Recess taken.)

[23] MR. LEVY: Ms. Barbulescu?

[24] MS. BARBULESCU: I have just a couple

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[1] of questions.

[2] REDIRECT EXAMINATION

[3] BY MS. BARBULESCU:

[4] Q: At the beginning of your testimony today, [5] Mr. Levy asked you some questions regarding the [6] development of facilities-based competition. Do [7] you remember that?

[8] A: Yes, I do.

[9] Q: If MCI purchases total combinations from [10] Bell Atlantic, can you please explain how that [11] purchase of total combinations would advance [12] facilities-based competition?

[13] A: I want to try and make myself clearer, [14] perhaps, than I was before. I'm not sure. MCI and [15] other CLECs do not have the benefit of establishing [16] a ubiquitous facilities-based network because we [17] don't have the kind of capital that Bell Atlantic [18] had when they put their network in the ground. [19] That's why they're the only people with a [20] ubiquitous network in the ground.

[21] Unbundled network elements allows a [22] CLEC like MCI to purchase those elements that are [23] absent from its facilities-based network until such [24] time that we, being MCI, can replace the Bell

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[1] Atlantic-provided UNEs with our own UNEs. [2] Unbundled network elements, as opposed to resale, [3] as I stated previously, allows CLECs the [4] flexibility to develop their own products based on [5] their customer needs. It gives us a whole new [6] marketing strategy, because we can target customers [7] based on their needs and wants, developing new and [8] exciting services, and determine where we are going [9] to place facilities, thus creating an — creating [10] an incentive for facilities-based competition.

[11] With resale, I can't imagine that any [12] CLEC who was committed to facilities-based [13] competition, or competition in the local market, [14] would want to depend on resale. It just ties the [15] competitive local-exchange carrier to Bell [16] Atlantic's retail service. There's no way to [17] dissociate yourself from it. You have no control [18] over what product offerings are going to be [19] introduced. You have no control over the price at [20] which they're going to be introduced. As Mr. [21] Falcone testified, we have no control over our [22] margin. We only get the avoided cost — the [23] discount, the 29 percent discount. But it doesn't [24] give us the margin that Bell Atlantic would have in

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[1] marketing the same product.

[2] You just couldn't be an effective [3] competitor without your own facilities. In order [4] to acquire facilities, it's going to take some [5] time. It's not going to be next year or three [6] years or ten years. It took Bell Atlantic 100 [7] years or more to put their network in the ground, [8] absent competition.

[9] Q: Ms. Guariglia, could you conceptualize [10] that if MCI were to buy all of the UNEs from Bell [11] Atlantic, it could also purchase or develop [12] electronics to change the function of those UNE [13] combinations?

[14] A: It's my understanding that, yes, we can.

[15] Q: Thank you. Ms. Guariglia, I'd also like [16] to ask you a followup to questions Mr. Beausejour [17] was asking you about Bell Atlantic's extended-link [18] proposal. If MCI had its switch located in the [19] Prudential Center in downtown Boston and MCI was [20] collocated at a Bell Atlantic central office [21] somewhere else in downtown Boston, can you please [22] explain how Bell Atlantic's extended-link proposal [23] would add additional costs?

[24] A: It would add additional costs because we

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[1] would have to transport to the collocated space and [2] then turn around and transport to our switch, [3] instead of going directly to our switch. I can't [4] testify to the benefits of extended link, because I [5] don't see any from a facilities perspective, and I [6] don't know of any from a cost perspective because [7] they haven't presented any costs associated with [8] this service. So I don't know what benefit that [9] would be to the company.

[10] MS. BARBULESCU: No further [11] questions.

[12] MR. LEVY: Mr. Beausejour?

[13] MR. BEAUSEJOUR: Nothing, Mr. Levy.

[14] MR. LEVY: Thank you. Mr. Falcone, [15] we had one quick question for you.

[16] ROBERT V. FALCONE, Previously Sworn [17] EXAMINATION [18] BY COMMISSIONER VASINGTON:

[19] Q: Ms. Guariglia mentioned earlier that you [20] cannot do the subplatform combination of loop and [21] transport

with RCMAC, and she mentioned that that [22] was her understanding. Is that also your [23] understanding?

[24] **A:** Absolutely it is true. But may I expound

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[1] upon that?

[2] **Q:** Please.

[3] **A:** You certainly could only use recent- [4] change capability to combine loops with switching [5] or transport and switching, because it's a function [6] of the switch. To combine loops with transport, [7] there is an electronic means to do that, called a [8] digital cross-connection frame. The one that I'm [9] most familiar with is a Lucent product called a [10] DACS frame, digital-access connection system. That [11] lets someone remotely configure loops to [12] transport. So, though it's not recent change, [13] there is another electronic means that's available [14] out there to allow loops to be combined with [15] transport that wouldn't require collocation.

[16] **Q:** So let's say AT&T was recombining network [17] elements primarily using the RCMAC system and then [18] decided that it wanted for some portion of [19] customers to do just a loop-and-transport [20] combination. It could do that also without using [21] collocation?

[22] **A:** That's correct, given the capabilities of [23] the digital cross-connection systems which, [24] according to the FCC order, we have. So there's no

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[1] need to collocate to configure a loop to a [2] dedicated transport system. Again, the physical [3] work would be done by Bell Atlantic. The actual [4] making the configuration could be done remotely, [5] using this digital cross-connection system's [6] capability.

[7] **Q:** Thank you.

[8] **MR. JONES:** Mr. Falcone is sort of [9] back on the stand, and he's recalled the name of [10] the second CommTech employee.

[11] **MR. LEVY:** What is that name?

[12] **WITNESS FALCONE:** I made a phone call [13] during the break to CommTech to say who was it I [14] was talking to. His name is Domenic Calabrese, and [15] he's a former NYNEX employee, coincidentally. So [16] he and Frank Loria are the two people I've been [17] primarily discussing this issue with.

[18] **MR. LEVY:** Thank you.

[19] **WITNESS GUARIGLIA:** Can I add to Mr. [20] Falcone's response?

[21] **MR. LEVY:** Sure, if you're still [22] here.

[23] **WITNESS GUARIGLIA:** I'm sure he would [24] agree with me that even though there's a, quote,

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[1] solution, it still adds additional steps and costs, [2] as opposed to having Bell Atlantic combine for us [3] and we would pay them the forward-looking NRC [4] associated with that work.

[5] **MR. LEVY:** I don't want to start [6] getting into a discussion between the two of you.

[7] **MS. BARBULESCU:** Could I ask a [8] followup question of Mr. Falcone?

[9] **MR. LEVY:** Yes.

[10] **EXAMINATION**

[11] **BY MS. BARBULESCU:**

[12] **Q:** What is the price associated with the [13] DACS frame for doing loop-and-port combinations?

[14] **A:** I have no clue. I don't know.

[15] **Q:** And is it currently in use by CLECs for [16] this purpose? Can you name one CLEC who is using [17] it today for this purpose?

[18] **A:** Not that I'm aware of.

[19] **MS. BARBULESCU:** I'd like to ask as a [20] record request for any cost data to support — to [21] let us know a little bit about the DACS frame and [22] any information on CLECs that might be used in the [23] DACS frame today.

[24] **MR. LEVY:** Would that be available to

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[1] you?

[2] **A:** I'm talking about a technical [3] capability. The FCC order — in the dedicated- [4] transport section of the FCC order, it clearly [5] gives CLECs the right to purchase dedicated [6] transport with digital cross-connection capability [7] as an unbundled element at cost-based rates. What [8] Bell Atlantic has established as the cost-based [9] rate to use their digital cross-connection [10] capability, I have no clue. If I bought an [11] unbundled loop or an unbundled DS1 loop and had [12] unbundled dedicated transport with digital cross- [13] connection capability, I would be able to combine [14] those elements remotely using that capability. [15] It's a technical capability. That's all I'm [16] discussing.

[17] **Q:** You don't know what any of the costs [18] associated with it are, do you?

[19] **A:** No, not at all.

[20] **MS. BARBULESCU:** I'd like to know [21] what the costs are that are associated with it, if [22] it's a proposal here.

[23] **MR. LEVY:** I'm not sure he's making [24] that proposal.

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[1] **MR. JONES:** It's a little bit odd, [2] because he was responding to a question, actually, [3] from the Bench, not putting forward an AT&T [4] proposal on this particular capability.

[5] **A:** I'm just giving a technical capability [6] that's out there. I'm not proposing that's a [7] better way of doing it. I agree that the best way [8] to do it is to have things combined by Bell [9] Atlantic. But if the CLECs were in a position [10] where they had to do this, combine the elements [11] themselves, collocation is not necessary here. [12] There is a way of doing it through this digital [13] cross-connection capability. That's all I'm [14] saying.

[15] **Q:** So you're not testifying that the costs [16] for this would be nonprohibitive?

[17] **A:** I'm not testifying that at all. If they [18] are truly cost-based, I would hope they're not [19] prohibitive, but I don't know that.

[20] **MR. LEVY:** Any further questions for [21] Mr. Falcone? Thank you. Your next witness, Mr. [22] Beausejour?

[23] **MR. BEAUSEJOUR:** Thank you, Mr. [24] Levy. I have Ms. Stern and Mr. Albert.

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[1] (Recess for lunch.)

[2] **MR. LEVY:** Let's go back on the [3] record. Mr. Beausejour, you had a couple of [4] witnesses today?

[5] **MR. BEAUSEJOUR:** We're going to just [6] call Mr. Albert this afternoon.

[7] DON ALBERT, Previously Sworn [8] DIRECT EXAMINATION [9] BY MR. BEAUSEJOUR:

[10] **Q:** Mr. Albert, I have a couple of questions [11] on Ms. Guariglia's testimony. To your knowledge, [12] does Bell Atlantic use concentration anywhere in [13] its Massachusetts interoffice transport network?

[14] **A:** No, we don't.

[15] **Q:** Does Bell Atlantic use concentration [16] anywhere in its Massachusetts loop-transport [17] network?

[18] **A:** We don't use it there either. The answer [19] is no.

[20] **Q:** Could you explain why Bell Atlantic [21] doesn't use concentration in its transport [22] networks?

[23] **A:** Yes. And probably it's an important [24] distinction to draw between multiplexing versus

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[1] concentration, to get that difference. With [2] multiplexing you're taking a number of inputs, and [3] you're aggregating them into a different format. [4] But with multiplexing the equivalent number of [5] inputs — say, 24 — is still equal to an [6] equivalent number of outputs. It

might be in a [7] different digital format, and it might be [8] aggregated together with multiplexing.

[9] In contrast, concentration has a [10] larger number of inputs than the outputs. So the [11] outputs are smaller. There is not one output for [12] every input. With concentration, which is [13] typically a function of the switching machines, [14] fewer inputs and fewer outputs, that concentration [15] does not occur either in our loop transport [16] networks or in our interoffice transport networks.

[17] We do multiplexing. We'll aggregate [18] signals. The inputs in a different digital [19] hierarchy will equal the equivalent outputs; but we [20] don't concentrate.

[21] Where you concentrate, inevitably [22] you'll get some degree of blockage. You've got [23] fewer points coming out than you do coming into [24] it.

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[1] MR. LEVY: So this GR-303 equipment [2] that was referred to earlier is concentration [3] equipment or multiplexing equipment?

[4] THE WITNESS: Both. It does both of [5] those functions. It will multiplex as well as it [6] will also concentrate. So the switching function [7] of concentration that performs that, the [8] transmission function of multiplexing, it also [9] performs that.

[10] Q: Mr. Albert, does Bell Atlantic have any [11] GR-303 systems in its Massachusetts interoffice [12] transport network?

[13] A: No, we do not.

[14] Q: Do we have any of those types of systems [15] in our loop-transport network in Massachusetts?

[16] A: No, we do not.

[17] Q: Could you comment on Mr. Falcone's [18] contention that the recent-change system provides [19] for the unbundling of link and port UNEs?

[20] A: Yes. My opinion is, the recent change [21] does not unbundle switching from the loop or from [22] the link. Recent change will put dial tone on a [23] line, and it will take dial tone off of a line, or [24] it will put features on a line and take features

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[1] off of a line. But the recent-change capabilities [2] of the switch don't do anything at all to identify [3] which switch port is either connected or associated [4] with a particular link or a particular loop. It [5] will not do that at all.

[6] If we go to the famous Figure 1 [7] diagram: What the recent-change capability will do [8] is, it will, as I said, it will turn dial tone on [9] or it will turn dial tone off. But it will not [10] connect or associate the link to that particular [11] switch port. The only thing that connects, [12] combines, the link to the switch port are the [13] railroad tracks, and these railroad tracks are [14] not — the physical running of the connections, [15] that is not affected by the recent change. You can [16] through a recent change have the railroad tracks in [17] place or they can not be there and with recent [18] change you can still turn dial tone on, turn dial [19] tone off. It's strictly modifying the function of [20] the switch.

[21] MR. LEVY: First of all, can we [22] assign a name to the railroad tracks, other than [23] "railroad tracks"?

[24] THE WITNESS: That would be the

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[1] cross-connection from the line side of the main [2] distributing frame to the switch side of the main [3] distributing frame.

[4] MR. LEVY: And when you say that the [5] recent change can do whatever it was going to do [6] even if that isn't there —

[7] THE WITNESS: That's right. For [8] instance, if a CLEC provided the loop, the recent [9] change would still turn the dial tone on and still [10] turn the dial tone off to the switch port. But the [11] connection from that loop to the switch port, the [12] combining of the two, is the railroad tracks, the [13] cross-connection that runs from the line side to [14] the switch side. As an addition to that —

[15] MR. LEVY: Before you do, I'm just [16] trying to distinguish between semantics here and [17] reality. Tell me what's wrong about what I'm about [18] to say. Is all you're saying that there has to be [19] a cross-connection between the line side and the [20] switch side to make a complete circuit?

[21] THE WITNESS: To combine the elements [22] together, yes.

[23] MR. LEVY: I'm trying not to use the [24] word "combine" because people are using that in

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[1] different ways. I'm talking about the creation of [2] a circuit. I think what you're saying is that a [3] full circuit that would include loop all the way to [4] switching does not exist unless there's a cross- [5] connection between the line side of the MDF and the [6] switch side of the MDF.

[7] THE WITNESS: That's correct.

[8] MR. LEVY: And I think you're also [9] saying that even if that cross-connection doesn't [10] exist, the switch could be programmed in such a way [11] that the port can be deemed to have or not have [12] certain functionality based on what's been [13] programmed.

[14] THE WITNESS: That's correct.

[15] MR. LEVY: The fact that the port [16] does or does not have dial-tone capability doesn't [17] mean anything unless it's connected to some link; [18] right? In terms of providing customer service?

[19] THE WITNESS: In terms of providing a [20] dial-tone service?

[21] MR. LEVY: Right.

[22] THE WITNESS: You'd need both of them [23] together. And the switch has no idea what link [24] it's connected to.

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[1] MR. LEVY: I understand that.

[2] THE WITNESS: There's nothing in the [3] switch at all that says, "Aha, that's the link I'm [4] connected to."

[5] MR. LEVY: But the RCMAC knows which [6] port is being given which instructions; correct?

[7] THE WITNESS: That's correct.

[8] Q: Could you comment on Mr. Falcone's [9] contention that changes in the MACSTAR system could [10] possibly be effected in six months at minimal [11] cost?

[12] A: To develop the capability of having CLECs [13] going in through the recent change and turning dial [14] tone on, turning dial tone off, there's a lot more [15] systems and components that need to be developed [16] than just the MACSTAR system. In Massachusetts [17] we've got two systems, MACSTAR and CCRS. The [18] acronym CCRS, there's a Bellcore system that does [19] the same thing. Both of those systems are capable [20] of being used as an option by Centrex customers for [21] adding features to and taking features off of a [22] subset of their Centrex lines.

[23] Now, in Massachusetts, both of those [24] systems are capable of talking to the different

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[1] switch types, but we've got some of our switches [2] that are hooked up to MACSTAR and some of our [3] switches that are hooked up to CCRS. We're not [4] about to throw either of them away.

[5] Now, in addition to that, the MACSTAR [6] system talks to another operations system, another [7] recent-change system, between itself and the [8] switch. To develop this overall capability, [9] development work is required not only in the [10] MACSTAR and the CCRS systems; it's also developed [11] in the — the development is also required in the [12] operations recent-change system that talks to the [13] switch, and development is also required in the two [14] different

vendors' switch types.

[15] The things I talked at the hearings [16] last time — there were a number of technical [17] issues, challenges, that would need to be solved in [18] order to completely create this capability. A [19] couple of more important ones were the aspect of [20] security and the aspect of contention. Contention [21] is the issue of the number of recent-change [22] messages that can be heading to the switch at any [23] one point in time and that can be processed by the [24] switch. You get into queuing or stacking up, in

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[1] terms of what the switch is able to receive and [2] process.

[3] Now, with the recent-change [4] alternative, as we've described it, that would [5] basically double the number of messages that we [6] would have to send to the switch in connection with [7] an order, the quantity of recent-change messages.

[8] **MR. LEVY:** Why?

[9] **THE WITNESS:** Because if we're [10] doing — if Bell Atlantic is just doing the turn-up [11] work in the switch, it's one recent-change message [12] that would set all the features, set the dial tone, [13] set the telephone number. If we're going to a [14] two-stage process, where Bell Atlantic does those [15] recent changes but then the CLEC comes in further [16] to then activate the dial tone, that then is then [17] two messages to the switch for that order, as [18] opposed to just the one, if Bell Atlantic was doing [19] it in the singular shot as we do it today.

[20] **MR. LEVY:** How is that different from [21] a Centrex user who comes in to do the same thing?

[22] **THE WITNESS:** With Centrex, what [23] they're doing is, they're changing features on the [24] lines that are already set up and defined in the

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[1] switch. They are able, once we have established [2] the line in the switch, to change call-waiting or [3] change speed calling.

[4] **MR. LEVY:** Or stop dial tone?

[5] **THE WITNESS:** I guess they could. [6] Typically it's not used for that.

[7] **MS. EVANS:** They don't use that [8] system to move a line — a Centrex user can't use [9] the system to move a telephone line from, say, one [10] office to another? In other words, I don't want [11] 1234 in that office any more, I want to move all [12] the functionality associated with Extension 1234 [13] and move it into the next office?

[14] **THE WITNESS:** They'll use it in [15] connection with other things to do that. They can [16] change the telephone number. That's one of the [17] features. The telephone number that rides on a [18] cable pair, they can change that. So when they get [19] into the moves, the changes, the rearrangements, [20] taking a telephone number and moving that from one [21] of their Centrex lines to another, different [22] Centrex line, in connection with other rewiring [23] that they would be doing at the customer prem., [24] that's probably the most typical example where you

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[1] see the Centrex subscribers doing that.

[2] **MS. EVANS:** Could I do that, though, [3] assuming for this example that the station wiring [4] is in place all the way back to the switch, could I [5] do that as a Centrex user without doing any [6] wiring? I'm simply sitting at my desk and I want [7] to program, I want my calls to now be at another [8] location. My phone number, the associated [9] software, my call-waiting, my forwarding, my speed [10] call, and all that type of thing, I want it to be [11] in another office because I'm moving offices. [12] Could I do that through these systems as a Centrex [13] user?

[14] **THE WITNESS:** If everything was [15] previously wired correctly and if the line that you [16] were moving from and the line that you are moving [17] to were both set up as part of the Centrex system, [18] then you could do that.

[19] I guess the other thing to add is, [20] for our own end users, we do not use the MACSTAR or [21] the CCRS systems to put dial tone on a line or to [22] take dial tone off of a line. We don't use that [23] for our own residence customers; we don't use that [24] for our own business customers; we don't use that

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[1] for our own Centrex customers.

[2] **MR. LEVY:** On this contention issue: [3] Explain to me a little bit more about the degree of [4] blockage that you believe might occur and what that [5] would actually mean in terms of the speed with [6] which messages arrive at the switch.

[7] **THE WITNESS:** I think what it means [8] is that there will be further development work to [9] improve the current switching arrangements, so that [10] those would not then be problems.

[11] **MR. LEVY:** That's not what I'm [12] asking. I don't have a sense of the magnitude of [13] the problems. For example, I don't have a sense of [14] what normal blocking rate you expect on messages to [15] a switch and how much capacity you put on those [16] input lines or whatever you would call them going [17] to the switch. In other words, you're asserting [18] that this contention issue is an issue, and I don't [19] have a sense of the order of magnitude or why you [20] think it is of that order of magnitude.

[21] **THE WITNESS:** I'm not sure of the [22] order of magnitude. It's an issue, I think, [23] that — I think there will be problems with it, [24] because we are experiencing problems today with it

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[1] in some switches. In particular, switches that [2] have a more-than-typical amount of Centrex [3] subscribers and in switches where more than a [4] typical amount of those Centrex subscribers use the [5] MACSTAR or the recent-change capability, there are [6] cases of those where we've encountered contention [7] problems today.

[8] **MR. LEVY:** What does it mean, [9] though? Does it mean that the signal doesn't go [10] through for five minutes or for 30 seconds or an [11] hour and a half?

[12] **THE WITNESS:** We've had ones up to [13] hours. You can get up easily to the messages being [14] backed up for a three- or four-hour period.

[15] **MR. LEVY:** Then are they queued?

[16] **THE WITNESS:** Queued and you get some [17] other oddities if the queues get too big and too [18] long and the messages start to get garbled and [19] lost.

[20] **MR. LEVY:** But there's a buffer [21] somewhere that collects the queue.

[22] **THE WITNESS:** Yes.

[23] **MR. LEVY:** And then as the switch [24] frees up they come by one by one or two by two and

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[1] the message comes through?

[2] **THE WITNESS:** Yes. The queues that [3] occur in the switch-tie support system that we do [4] our recent changes through, we ourselves, for our [5] own end users, don't use the MACSTAR and the CCRS [6] system. There's another system between it and the [7] switch which we use to make those types of changes [8] for our own end users.

[9] **MR. LEVY:** What is that one called?

[10] **THE WITNESS:** RMAS is the acronym [11] you'll most typically hear referred to for that [12] system.

[13] **MR. LEVY:** What does that mean?

[14] **THE WITNESS:** Recent memory [15] administration system. I think it's short for [16] recent change.

[17] **MR. LEVY:** Is that the one you would [18] use for turning dial tone on and off?

[19] **THE WITNESS:** Yes. Our switch [20] technicians would work through that,

and that in [21] turn works through the switch to get the messages [22] to it.

[23] **MR. LEVY:** So your technicians would [24] be sitting at an RMAS terminal.

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[1] **THE WITNESS:** Yes.

[2] **MR. LEVY:** And they'd put through [3] changes with regard to dial tone, with regard to [4] features, and so on.

[5] **THE WITNESS:** And new lines. And [6] those then queue up within RMAS and then they'll [7] queue up to another degree within the switch.

[8] **MR. LEVY:** And I guess the logical [9] question that would follow is: Why couldn't a CLEC [10] have a RMAS-like system that would then feed into [11] the MACSTAR and CCRS system the way you do?

[12] **THE WITNESS:** I think that gets back [13] to my point: Technologically you can develop, with [14] enough time and enough money, to put a man on the [15] moon. I'm sure we could develop something like [16] what you're describing.

[17] **MR. LEVY:** I'm asking for something [18] simpler, which is why couldn't they just have an [19] RMAS terminal that had a security system on the [20] back end of it to make sure that unauthorized [21] people weren't using it?

[22] **THE WITNESS:** I think you could [23] develop that just as similarly as you could develop [24] the MACSTAR or the CCRS system. I think either of

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[1] those options would be a way to develop lots of [2] people all being able to go in and make changes. [3] But it gets back to you've got major issues for [4] both security and firewalling and for the [5] contention that would require investigation and [6] development so that there would not be problems.

[7] **MR. LEVY:** Those sound like the same [8] kinds of issues that revolve around CLEC use of [9] other OSS's that the company has in place. Are [10] they qualitatively different?

[11] **THE WITNESS:** They're different [12] because these ones are specific to the recent- [13] change operation-support system and specific to the [14] switch. The other systems that we have developed [15] over a number of years for — we recently have for [16] CLECs, none of those systems or development come [17] through and touch the switch or touch the recent- [18] change system. They come in on the ordering [19] systems. They come in on the maintenance systems. [20] They come in through the systems that exist for [21] preordering.

[22] **MR. LEVY:** I understand they do. But [23] my understanding of earlier company testimony is [24] that the design of those OSS interfaces to the

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[1] CLECs is such that in essence in great measure the [2] combination of OSS's downstream of this CLEC [3] interface is designed to work in a similar fashion [4] as to when a Bell Atlantic employee is approaching [5] those OSS's through his or her interface. So I'm [6] trying to understand in what way this would be [7] qualitatively different from a CLEC interfacing the [8] rest of the Bell Atlantic OSS's.

[9] **THE WITNESS:** In terms of having to [10] develop security, I think you'd have to develop [11] security the same way. I don't think the issues [12] are significantly different. It's the same issues [13] applied to systems that they haven't been applied [14] to previously and applied to the switching machines [15] themselves, which those issues always haven't been [16] applied to previously.

[17] **MR. LEVY:** But once again, from [18] earlier company testimony, I thought, for example, [19] that on the ordering and provisioning OSS's, at [20] least some of them ended up interfacing with the [21] recent-change OSS, so that orders could flow [22] through when they're put in by the CLECs.

[23] **THE WITNESS:** That's correct. The [24] orders will eventually come down — the

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[1] recent-change operations system is a provisioning [2] system, and it is in the downstream flow from those [3] CLEC orders that will be input up at the very head [4] end. So it is one of the, I don't know, three or [5] four major provisioning systems that are all [6] downstream for those incoming CLEC orders.

[7] **MR. LEVY:** Thank you. Mr. [8] Beausejour, I think I interrupted you.

[9] **MR. BEAUSEJOUR:** You did, but that's [10] fine. I just have a few more questions, Mr. Levy.

[11] **Q:** Mr. Albert, Mr. Falcone indicated that [12] Bell Atlantic does not remove connections when [13] customers move. Can you comment on that?

[14] **A:** Yes. That's not completely correct, [15] either. For residential customers, with a customer [16] moving out and another customer moving in, we will [17] try to leave in place the connections and reuse [18] them. Now, we're not always successful in doing [19] that, because in order to leave them in place, for [20] every one that you leave you need spare loop [21] facilities, you need spare switching facilities, [22] you need them available spare for whatever period [23] of time before the new customer moves in. So for [24] residence, yes, we try to leave them in place, but

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[1] we're not always successful in accomplishing that.

[2] For business and for Centrex we do [3] not leave them in place. Those the railroad track, [4] the connection from the line side to the switch [5] side, those connections are taken down at the time [6] a customer disconnects their service. So only in [7] the residential environment and only for [8] residential first lines do you find us leaving them [9] in place and then trying to reuse them. But for [10] second lines, businesses, Centrexes, PBXs, the [11] connections come down at the time the service is [12] disconnected.

[13] **MR. BEAUSEJOUR:** Mr. Levy, I have no [14] further questions.

[15] **MR. LEVY:** Thank you. Mr. Jones or [16] Ms. Barbulescu?

[17] **MR. JONES:** I have a few, if I [18] could.

[19] **CROSS-EXAMINATION**

[20] **BY MR. JONES:**

[21] **Q:** Mr. Albert, are you familiar with Bell [22] Atlantic's OSS development cost study submitted in [23] this docket?

[24] **A:** No.

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[1] **Q:** Are you familiar with Bell Atlantic's OSS [2] cost studies submitted in any New England or New [3] York jurisdiction?

[4] **A:** No. I'm familiar with the ones in the [5] South to some degree.

[6] **Q:** In the OSS cost studies submitted by Bell [7] Atlantic South, do those include costs for [8] modification of the service-provisioning [9] operating-support systems for Bell Atlantic South?

[10] **MR. BEAUSEJOUR:** I'll object. I [11] don't see where the question is relevant.

[12] **MR. JONES:** Well, it goes directly to [13] following up on what you were asking about, Mr. [14] Levy, which is: What are we talking about here in [15] terms of time and cost to solve all the problems [16] that Mr. Albert claims would exist with the [17] recent-change capability?

[18] **MR. LEVY:** Let's proceed.

[19] **Q:** Do you recall my question?

[20] **A:** Hit me with it one more time.

[21] **Q:** In the OSS development cost studies [22] submitted by Bell Atlantic South that you're [23] familiar with, do those cost studies reflect [24] development costs to modify Bell Atlantic South's

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[1] provisioning operating-support sys-

tems?

A: There were a number of OSS cost studies. I'm not sure which ones did include those costs. But I know those costs were quantified and included in some portion of the cost studies. I'm not familiar enough with the total structure of each and every one of the different cost studies that was done to know which one of those that those costs wound up in, but they did wind up in one of them.

Q: Do you know whether in any of those cost studies Bell Atlantic South is requesting recovery of costs it claims it incurred to modify its provisioning operating-support systems in order to make them CLEC-usable or -accessible?

A: To make those systems accessible by the CLECs?

Q: The provisioning OSS's usable by or accessible to CLECs.

A: In the systems in the South, I'm not aware of any of them for provisioning that are directly accessible by a CLEC. They are downstream of the ordering systems, which are accessible by the CLECs.

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Q: Let me phrase it differently. Did any of the OSS development cost studies reflect or include costs to modify the provisioning OSS's?

A: I think that's what you had asked a question or two before this, and I said yes, I wasn't sure which study that was in, but they were in one of the number of ones that were done.

Q: In the Bell Atlantic - New York prefiling statement, which is AT&T Exhibit Combinations 3, Bell Atlantic has made various representations or commitments to the New York Public Service Commission with respect to modifications to its operating support systems, has it not?

A: I believe that's in there.

Q: Including modifications to its provisioning OSS's; is that correct?

A: If you have the document in front of you and you see that, I'll accept that as correct. I have not read that portion of it myself enough to know that off the top of my head.

MR. BEAUSEJOUR: Mr. Jones, are you referring to a specific page of the document?

MR. JONES: I am not.

Q: Mr. Albert, do you know whether it's the

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representation of Bell Atlantic - New York in the prefiling statement as a general proposition that it will attempt to modify, upgrade, whatever the right verb is, its operating support systems so that those will provide flow-through capability for CLEC service ordering and provisioning?

A: No, I'm not familiar to what degree that's in there.

Q: Do you know whether Bell Atlantic has, or NYNEX before it, has conducted any sort of business case to analyze the time and expense that would be involved to modify either the MACSTAR and CCRS systems or to modify the RMAS system, to make those systems accessible by and usable by CLECs?

A: When we had the hearings last time, I said we were working towards trying to better understand in detail the specifics of what would be involved to do that. Really, one of the greatest difficulties we're having is establishing and speccing out in sufficient detail how security will be handled.

When I mentioned a couple of major issues, it's easy to say you've got to put up a firewall and wave your hands, but when you have an

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environment where MACSTAR and CCRS today have just a narrow universe of Centrex subscribers, they can only access and do things to their predefined lines, that's much different than the security environment you'd have to have for a multiple number of CLECs being able to access the entire switch and do something to any line at all in the switch. We've been trying to work through to specify —

Q: Mr. Albert, my question was quite specific. Let me ask it again. Are you aware as to whether Bell Atlantic has performed a business-case analysis to determine the time involved and the cost involved to modify either the MACSTAR or CCRS, on the one hand, or the RMAS system, on the other hand, to make them available to or accessible by CLECs?

A: I was trying to explain, that's what I've been working on, and that the steps and the complications and the detail required —

Q: Mr. Albert, has it been done or hasn't it been done?

A: No, we have not finished doing it.

Q: Thank you, sir. Now, did Bell Atlantic

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or NYNEX before it conduct a business-case analysis, to your knowledge, at some point in time to determine the time involved and the expense involved in order to provide Centrex customers with access to the recent change capability of the switch?

A: I don't know. I mean, that is a tariffed capability that is available. There are, I would assume, cost studies that are behind that, but I really don't know.

Q: How long has that capability been available to Centrex customers?

A: I'd say since the mid- to early '80s.

Q: Since you haven't completed a business-case study at this point, Mr. Albert, you can't quantify — the company hasn't quantified the time period that would be required to make modifications of the sort we've been talking about to either the MACSTAR-slash-CCRS or RMAS systems; is that correct?

A: The hearings that we had last time, my best estimate was more than a year for those systems and also for the switches, those being all the different piece parts that would require

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further development work in order to create this type of service and capability.

Q: Is there a document that exists today within Bell Atlantic which sets forth the analysis and sets forth a conclusion as to the amount of time that would be required to make the modifications of the sort we're talking about either to MACSTAR/CCRS or to RMAS?

A: No.

Q: Is there a document that exists today that sets forth an analysis and reaches a conclusion as to the cost that would be involved to modify either MACSTAR-slash-CCRS or RMAS in the way we've been talking about?

A: No. That's what we're working on.

Q: And when is it projected that your work will reach a conclusion?

A: I really don't know. The biggest dilemma we've had is trying to figure out how to really spec out security, how that will operate and function in the multi-CLEC environment, so that we could even get that figured out in enough detail to take it to the vendors to get them to give us a price quote. At this point we have not been able

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to spec out and develop an approach to that that we think would work, to function and operate as well as then to be in enough level of detail to be able to get the vendors to quote back to.

Q: Have you personally had any con-

tems?

A: There were a number of OSS cost studies. I'm not sure which ones did include those costs. But I know those costs were quantified and included in some portion of the cost studies. I'm not familiar enough with the total structure of each and every one of the different cost studies that was done to know which one of those that those costs wound up in, but they did wind up in one of them.

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environment where MACSTAR and CCRS today have just a narrow universe of Centrex subscribers, they can only access and do things to their predefined lines, that's much different than the security environment you'd have to have for a multiple number of CLECs being able to access the entire switch and do something to any line at all in the switch. We've been trying to work through to specify —

Q: Mr. Albert, my question was quite specific. Let me ask it again. Are you aware as to whether Bell Atlantic has performed a business-case analysis to determine the time involved and the cost involved to modify either the MACSTAR or CCRS, on the one hand, or the RMAS system, on the other hand, to make them available to or accessible by CLECs?

A: I was trying to explain, that's what I've been working on, and that the steps and the complications and the detail required —

Q: Mr. Albert, has it been done or hasn't it been done?

A: No, we have not finished doing it.

Q: Thank you, sir. Now, did Bell Atlantic

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or NYNEX before it conduct a business-case analysis, to your knowledge, at some point in time to determine the time involved and the expense involved in order to provide Centrex customers with access to the recent change capability of the switch?

A: I don't know. I mean, that is a tariffed capability that is available. There are, I would assume, cost studies that are behind that, but I really don't know.

Q: How long has that capability been available to Centrex customers?

A: I'd say since the mid- to early '80s.

Q: Since you haven't completed a business-case study at this point, Mr. Albert, you can't quantify — the company hasn't quantified the time period that would be required to make modifications of the sort we've been talking about to either the MACSTAR-slash-CCRS or RMAS systems; is that correct?

A: The hearings that we had last time, my best estimate was more than a year for those systems and also for the switches, those being all the different piece parts that would require

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further development work in order to create this type of service and capability.

Q: Is there a document that exists today within Bell Atlantic which sets forth the analysis and sets forth a conclusion as to the amount of time that would be required to make the modifications of the sort we're talking about either to MACSTAR/CCRS or to RMAS?

A: No.

Q: Is there a document that exists today that sets forth an analysis and reaches a conclusion as to the cost that would be involved to modify either MACSTAR-slash-CCRS or RMAS in the way we've been talking about?

A: No. That's what we're working on.

Q: And when is it projected that your work will reach a conclusion?

A: I really don't know. The biggest dilemma we've had is trying to figure out how to really spec out security, how that will operate and function in the multi-CLEC environment, so that we could even get that figured out in enough detail to take it to the vendors to get them to give us a price quote. At this point we have not been able

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to spec out and develop an approach to that that we think would work, to function and operate as well as then to be in enough level of detail to be able to get the vendors to quote back to.

Q: Have you personally had any con-

versations with the vendors of either MACSTAR or CCRS concerning the security issues?

A: Me personally?

Q: Yes.

A: No.

Q: Do you know how long it took from beginning to end for — let's stick with NYNEX — whenever it happened, for NYNEX to perform the analysis to determine how to resolve the security issues at the time it developed the access to the recent-change systems that it made available to Centrex users?

A: No. That was initially really rolled out as an AT&T product. The MACSTAR system was initially developed from Bell Labs, from AT&T, and rolled out in connection with their switches. I think the 1AESSes were the very first switches that came out.

Q: Just so it's clear to me, Mr. Albert:

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The RMAS system that Bell Atlantic employs is a recent-change — provides recent-change functionality. Is that an accurate statement?

A: It's in the flow of getting recent-change messages sent to the switch. It's used to create the messages —

Q: And between the RMAS system and the switch there is no intervening —

MR. BEAUSEJOUR: Mr. Jones, he didn't finish his answer.

MR. LEVY: Finish your answer.

A: The rest of the answer is that system is used to create the messages and then to then store and send those messages to the switch and to get acknowledgments back.

MR. LEVY: And as we said before, I think you said before, the RMAS is where the Bell Atlantic technician would send the message.

THE WITNESS: Right. This recent-change system, it's where the message is then created and sent from to the switch.

MR. LEVY: So the Bell Atlantic technician is inputting into RMAS, and then the order flows through MACSTAR or CCRS. Is that

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correct?

THE WITNESS: No. For Bell Atlantic, working on an order for its own end users, we never touch or use the MACSTAR or the CCRS systems. When we turn dial tone on and off for our own users, when we modify features, it never hits either of those.

MR. LEVY: So the RMAS is the recent-change operating support system for Bell Atlantic.

THE WITNESS: Right.

MR. LEVY: The other one, the MACSTAR or the CCRS, is only for Centrex users?

THE WITNESS: That's correct. That's the point I was trying to get at: That's only for Centrex customers, and only for them to make these defined changes to their predetermined lines that are part of the Centrex group.

MR. LEVY: Is there any intelligent communication between MACSTAR or CCRS and RMAS?

THE WITNESS: Yes.

MR. LEVY: In which direction, by whom?

THE WITNESS: When I said "yes," the

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recent-change messages flow from there into the switch.

MR. LEVY: Is there any flow between MACSTAR-slash-CCRS and RMAS?

THE WITNESS: Yes.

MR. LEVY: Explain that flow.

THE WITNESS: The messages that are created in MACSTAR are then further buffered and created — it's kind of like a short cut that's done in MACSTAR. And then in RMAS is where they go into the hopper with all the other messages that are being sent to the switch. So PIC changes, new lines, feature changes — we'll also dump bulk PIC changes from RMAS as those come from the long-distance carriers.

MR. LEVY: So I could consider MACSTAR or CCRS as kind of a buffer or interface between a Centrex customer and RMAS.

THE WITNESS: Yes.

MR. LEVY: Whereas a Bell Atlantic technician goes directly into RMAS.

THE WITNESS: That's correct.

MR. LEVY: Thank you.

Q: And in fact, for Bell Atlantic, if you're

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talking about service provisioning where physical facilities are already in place and you're using your OSS's and an order is flowing through, no Bell Atlantic technician actually directly accesses RMAS, but, rather, the directions to RMAS come from other OSS's originating with the service-order agent, or whatever the right term is. In a flow-through situation, isn't that how it functions?

A: I'm assuming when you say flow-through, you mean completely flowing through the ordering, as well as the provisioning systems, as well as getting the service actually activated in the switches and delivered to the end user.

Q: Good assumption.

A: Yes, it does go through without technician involvement in those cases, for that definition of flow-through.

Q: And when a Centrex customer wants to use the recent-change functionality to change its service assignments, its initial interface or point of contact with the recent-change system is either to, depending on what's at the central office, the MACSTAR or the CCRS? Is that accurate?

A: Say that one more time.

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MR. JONES: Could I use the board?

MR. LEVY: Sure, if you think it will help.

Q: Mr. Albert, here's a Centrex customer, and here's a regular old plain me, Bell Atlantic customer. The residential customer orders service, talks to a Bell Atlantic order-taker, and in the complete flow-through environment that I just asked you about a minute ago, everything flows through. The human being here, the Bell Atlantic order-taker, when I'm ordering this service enters an order in the system and from that point forward everything flows through the OSS's electronically. Correct? Ordering, provisioning, setting up the billing record, all of that is done electronically in the complete-flow-through scenario.

A: For the types of orders that are able to flow through and if all the facilities are there and preprovisioned and in place, yes.

Q: Which is what I was trying to say a short cut by saying "a complete-flow-through scenario," so we don't have to add those every time.

And among the things that flow through are the RMAS system, which then talks

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directly to the switch. Is that correct? The recent-change functionality flows through and goes directly from RMAS to the switch?

A: Generally, the way you've drawn is correct. The middle piece, where you've labeled OSS's, there are a number of other systems, and they aren't all serial in operation.

Q: No, they're all over the place. Some

go this way, some connect. You've got a building out here. You've got the maintenance records out here. I understand. I didn't mean to imply that.

A: For the tail end where you hit RMAS and then out to the switch, that's correct.

Q: And then up here we have MACSTAR. Is that what it is, MACSTAR and CCRS, one or the other? Depending on what central office you're talking about.

A: Yes.

Q: MACSTAR and CCRS are connected to RMAS; correct?

A: That's correct.

Q: So orders that come out of MACSTAR and CCRS make it to the switch through RMAS.

A: Yes. And what you also have — and I

think when I was talking about the development required, I may not have mentioned these pieces, also. The ordering and the billing systems also tie in to the MACSTAR arrangements. Those would also require further development for creating this capability that we're talking about.

Q: Sure. You'd have to do some other modifications to your other OSS's.

A: Yes.

Q: Just the way Bell Atlantic has modified all of these OSS's and claimed $108 million in OSS development costs for the things it chose to modify. Isn't that generally accurate?

A: I'm not familiar with the $108 million and....

Q: When the Centrex customer wants to change something out here in the switch using recent- change functionality, how does it communicate to MACSTAR or CCRS?

A: It's got a terminal.

Q: So the Centrex customer has the equivalent of the Bell Atlantic order-taker, who's got a computer terminal, and the Centrex customer enters some electronic software-driven changes,

which go to MACSTAR CCRS, which flow through to RMAS, which flow through the switch. Is that correct?

A: Not completely. I would not come anywhere near to equating the terminal and the capability the Centrex customer has to the terminal and the capability that the Bell Atlantic — what you call the Bell Atlantic order-taker has. It's a special terminal set up for the MACSTAR Centrex functions and capabilities that's singularly used for that, and the functions are narrowly oriented to what that Centrex customer is able to do and change. It's not like creating a service order; it's more like doing a recent-change message.

Q: But it's a computer terminal with a human being at it.

A: That's correct.

Q: In that sense, it's the same as the Bell Atlantic order-taker, which is also a human being at a computer terminal.

A: That piece is the same, yes.

Q: And beyond that computer terminal, everything moves electronically and changes the functionality and the assignments out here in the

switch.

A: For which situations?

Q: Both.

A: Sometimes. Not all the time.

Q: When Bell Atlantic developed this capability through the MACSTAR and the CCRS, the reason the MACSTAR/CCRS step is in here — which is where you deal with all of the security issues; is that correct?

MR. BEAUSEJOUR: Did you say when Bell Atlantic developed the MACSTAR and CCRS capability?

MR. JONES: Strike that.

Q: For purposes of this diagram, the MACSTAR/CCRS, that's the place in the system where the security issues you've talked about are dealt with?

A: Not completely. I think there's also some security that's dealt with in the RMAS system, also.

Q: You think so. You're not sure.

A: Not sure in connection with working with the MACSTAR service. For our own employees that use the RMAS system, there is security associated

with those.

Q: I just want to be sure — I think this is going to be redundant, and for that I apologize, but I just want to be absolutely sure. Has either NYNEX previously or Bell Atlantic currently performed a business-case analysis in which it has determined either the length of time or the cost required to modify MACSTAR and/or CCRS to permit CLEC access to the recent-change methodology through that?

A: And that's what I said we're working on and we're not completed yet.

Q: Has Bell Atlantic or previously NYNEX performed a business-case analysis to determine the cost and expense involved in modifying RMAS to permit direct CLEC access to the recent-change functionality?

A: No.

Q: The issue of concentration that you talked about, Mr. Albert: Where in my —

MR. LEVY: Contention, I think, was the issue.

MR. JONES: What did I say?

MR. LEVY: Concentration.

MR. JONES: Thank you. I misspoke.

Q: Contention; is that correct? Is that because two things are contending for the same space? Why is it called contention?

A: They're contending for the attention and the processing of the processor and the switch. It's like if a million people were trying to talk to you all at the same time, you wouldn't be able to deal with that.

Q: It's getting Shakespearean. I'm envisioning all this turmoil and conflict going on in MACSTAR and CCRS and RMAS.

MR. LEVY: Don't worry, all's well that ends well.

Q: Where does contention occur, primarily, in MACSTAR or in RMAS?

A: Let me draw it for you. Right in at the switch. And if you want to complete the picture —

Q: Let me stop you there, just so I'm clear. So contention is a function of what Bell Atlantic for its own purposes is introducing into the recent-change systems and what the Centrex customers are introducing into the recent-change system. Both of those contribute to contention.

A: That's correct. All of those are inputs to the switch that it needs to contend with. There are also, to give you the complete picture, also Bell Atlantic functions that are done on terminals into the recent change that also go straight into the switch. These are primarily associated with service orders.

MR. LEVY: "These" meaning the RMAS?

THE WITNESS: The RMAS are primarily associated with the service-order-driven maintenance and repairs. Pair and rearrangement and trunk-related functions come in, and

those are [13] also bidding contentionwise for messages to get [14] into the switch.

[15] Q: And when contention gets to be too big a [16] problem at a particular switch, what's the [17] solution?

[18] A: It slows down and doesn't process [19] messages.

[20] Q: And when it doesn't do that and it gets [21] over some Bell Atlantic threshold, what does Bell [22] Atlantic do about it?

[23] A: We have no fix.

[24] Q: You can't increase the switch capacity?

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[1] A: That would take development. I mean, [2] when we encounter it today with the current [3] limitations that exist, it just backs up, and if it [4] backs up a lot, then some messages will be lost. [5] Now, could development work be done to provide more [6] overall processor power and capacity? Yes.

[7] Q: It's a question of switch capacity, is it [8] not?

[9] A: It's development work in the switch, and [10] it's a function of the number and the types of [11] messages that are being handled by the switch.

[12] Q: Mr. Albert, let's try to be clear. Is [13] the purpose of development work in the switch to [14] increase the capacity of the switch?

[15] A: To increase the capacity and the ability [16] of the switch to handle and process recent-change- [17] type messages.

[18] Q: Sure.

[19] A: Yes.

[20] Q: So that's how you fix the problem when it [21] becomes too severe: You increase the appropriate [22] capacity of the switch.

[23] A: Right. That's what we would —

[24] MR. BEAUSEJOUR: Excuse me. Let the

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[1] witness answer, Mr. Jones.

[2] A: That's what we would have to have [3] development work done for, and that's what gets [4] into the time and the money to do those things [5] associated with creating this overall capability.

[6] Q: And when the capability was created for [7] Centrex customers, whatever development work at the [8] switch that was required in order to provide that [9] capability was performed at some point in time. Is [10] that a safe assumption?

[11] A: Yes, but you really need to qualify that, [12] because when the MACSTAR and CCRS were first [13] created, it was 1AESSes that were the switches that [14] were being used and the Centrex customers were on. [15] Now we've got the digital switches, the 5ESSes from [16] Lucent, the DMS 100s from Nortel.

[17] Q: Whatever the switches were, sufficient [18] development work was done on them to provide [19] capacity necessary to give Centrex customers the [20] recent-change functionality. Is that a safe [21] assumption?

[22] A: Yes. And it wasn't development work so [23] that there were no problems as a result of it, but [24] it was development work that attempted to minimize

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[1] problems that came along as a result of it. As I [2] was describing, there are Centrexes today that have [3] much more — I mean switches today that have much [4] more than the typical amount of Centrex, and of [5] those customers, they've got more than a typical [6] amount of MACSTAR usages, and in ones of those [7] combinations in particular, we have had contention [8] problems with not having enough resources to handle [9] the messages. That's where we hit the backup in [10] the queue; and if they back up far enough then you [11] also start to get into error and lost-message [12] conditions.

[13] Q: And if you lose enough messages, you [14] increase the capacity of the switch; right?

[15] A: If you lose enough messages enough times, [16] yes.

[17] Q: If Bell Atlantic were required to choose [18] between providing the UNE platform to CLECs or [19] providing access, direct access, to its recent- [20] change functionality to CLECs, which would it [21] choose?

[22] A: I don't know.

[23] MR. JONES: I have no further [24] questions for Mr. Albert.

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[1] EXAMINATION

[2] BY MR. LEVY:

[3] Q: Is there a measure or a metric that [4] describes contention?

[5] A: Not that I'm aware of. We get queues of [6] particular sizes, but it's not like it's inches or [7] it's pounds or it's cubic feet. The measurements [8] that I encounter when we have difficulties are the [9] overall length of time to get a message through to [10] a switch. The ones where we've had problems, we've [11] been getting up into the four-hour, five-hour range [12] from when a message has been sent. So, for what I [13] have dealt with myself and experienced, that's been [14] the primary indication of contention.

[15] Q: If there were no contention, how long [16] would a message have to wait?

[17] A: Fractions of seconds.

[18] Q: It would be virtually instantaneous.

[19] A: Yes.

[20] Q: At what point in the current system would [21] you deem — or how would you deem that contention [22] had gotten sufficiently bad that an upgrade of the [23] switch was necessary? Is there a metric that you [24] use that basically says, "This is the threshold.

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[1] It's gotten too bad. It's time to fix it"?

[2] A: No, that's more operational judgment, [3] from when is it encountered too frequently and when [4] is it enough of a problem to go to the vendors to [5] get them to do something about it.

[6] Q: And have there ever been circumstances [7] where you've done something about it on a switch in [8] Massachusetts?

[9] A: No, not that I'm aware of.

[10] Q: And the reason is that it's —

[11] A: I've only been responsible, working for [12] Massachusetts, since the merger. I've been [13] involved in cases in the C&P territories where [14] specific switches, we've gone back, some of the [15] ones we were talking about where we have problems, [16] to try and get fixes and improvements.

[17] Q: Were these switches that had the Centrex [18] capability built in?

[19] A: Yes.

[20] Q: At what point did you decide that things [21] were bad enough that there needed to be a fix?

[22] A: I think it was about the third time we [23] ran into contention that lasted more than an hour [24] on that switch. It's not a condition that you'd

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[1] design for or want to tolerate. When you [2] experience it, you want to get rid of it. It's not [3] like trunk-blockage, where you innately say you're [4] going to have some of it and here's an acceptable [5] level. Operationally, you can encounter it once or [6] twice and the world won't end, but you certainly [7] don't want to keep on operating that way every week [8] or every month or every year.

[9] Q: Wouldn't you conduct some kind of [10] business analysis to decide that it's worthwhile to [11] spend money on the fix?

[12] A: No, on a lot of operational pro-

blems, [13] it's to the point where it's not acceptable to have [14] it occur.

[15] **Q:** What's the "it"? An hour?

[16] **A:** This is where the subjective comes in. [17] My opinion would be, if you're encountering it once [18] a month, that's too much.

[19] **Q:** "It" meaning an hour?

[20] **A:** Backups on messages so that they're not [21] getting processed near-instantaneously.

[22] **Q:** So any backups? Before I thought you [23] were saying that if it was lasting an hour or so [24] that it was — maybe I misheard you — was

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[1] unacceptable.

[2] **A:** That was an example. That's when you'd [3] be getting to a degree where, yes, that's getting [4] pretty bad.

[5] **Q:** I'm really trying to ask you to inform me [6] a little bit more as to how and when you make the [7] business decision that you're getting too much [8] contention going into one of these switches. Are [9] you suggesting that if for —

[10] What are you suggesting?

[11] **A:** If you'd like, if you want something [12] beyond my own operational opinion, I can get that [13] from others and get that back to you as a record [14] request, if you'd like — if you want something [15] that would be more of a generality that would fit [16] for Massachusetts.

[17] **Q:** Let me try and frame the record request, [18] which will be No. 17, which would be to have you [19] provide us with recent examples in the Bell [20] Atlantic territory, broadly construed, in which the [21] kind of contention you've discussed here has [22] resulted in an upgrade to the switches in question [23] or some other fix; the measure of contention that [24] resulted in that decision; and the cost of the

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[1] fix. I'll rely on your judgment to provide two, [2] three, four, five, six examples, whatever you think [3] is appropriate — just to give us a sense of what [4] it takes to make the change. Is that clear?

[5] **A:** Yes.

[6] **(RECORD REQUEST.)**

[7] **MS. EVANS:** The RMAS system, does the [8] RMAS system have any kind of buffering [9] functionality that can slow messages down before [10] they go into the switch?

[11] **THE WITNESS:** Yes.

[12] **MS. EVANS:** Does the RMAS system know [13] when or is someone able to tell the RMAS system [14] when the switch is too busy and messages need to be [15] slowed down?

[16] **THE WITNESS:** Yes, the switch will do [17] that. The switch will put up the caution flags [18] when it starts getting too busy.

[19] Why it gets difficult to describe and [20] what you wind up with, the resources that are being [21] drawn in the switch, where you get the contention [22] problems, they do more things than just process [23] recent-change messages. You know, you're [24] contending for the overall processing power within

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[1] the switch, which that processing power is also [2] used for processing calls. If the recent-change [3] messages are occurring at the time you're at your [4] peak busy-hour calling, you'll get different drains [5] on the resources.

[6] So the whole technical point of [7] contending for the resources in the switch has a [8] number of other factors besides just strictly the [9] messages piece of it.

[10] **MS. EVANS:** But the piece we're [11] discussing here is the possibility of increasing [12] the messages that come from RMAS because of CLEC [13] access to RMAS, is my understanding. Therefore, [14] we're not talking about increasing any other of [15] these pieces; here we're talking about the [16] possibility of increasing recent-moves-and-changes- [17] type messages to the switch.

[18] **THE WITNESS:** Yes, but where it gets [19] more complex is the resources in the switch that [20] are required to process those messages also are [21] used for many other things. They are used for the [22] maintenance functions in the switch. They are used [23] for the processing of live calls within the [24] switch. So part of the ability of a number of

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[1] messages for the switch to process also is then [2] influenced by all these other activities that are [3] going on that are also taking resources of the [4] processor.

[5] **MS. EVANS:** But as far as messages [6] going on the switch on recent changes, you have a [7] capability to slow those messages down when the [8] switch says, " Hey, I'm getting too busy. I can't [9] take this right now."

[10] **THE WITNESS:** Right.

[11] **Q:** Is there a way to prioritize the messages [12] coming through RMAS versus the maintenance kinds of [13] messages?

[14] **A:** Yes. Maintenance take a higher priority [15] than service order.

[16] **Q:** So if there is contention, the service- [17] order changes will be the ones that are delayed.

[18] **A:** Maintenance wins out over service order. [19] Live call-processing wins out over maintenance.

[20] **Q:** Live call-processing is?

[21] **A:** The resources that you're contending for [22] in the switch, there are different degrees of what [23] will be serviced or handled next. The demand for [24] those resources driven by live call-processing is

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[1] the first priority in the hierarchy of demands on [2] the switch.

[3] **Q:** Let me modify my record request a little [4] bit. I think I left it a bit too general. First [5] of all, let's just focus on Bell Atlantic North, [6] previous NYNEX territory. And let's look at the [7] examples that would have occurred of these fixes to [8] the contention problem let's say within the last [9] year and a half or two years within that [10] territory.

[11] **A:** Okay.

[12] **Q:** Meaning all of them.

[13] **A:** Okay.

[14] **Q:** Unless I'm asking for hundreds. But it [15] sounds from your previous answer that they don't [16] occur too often, so that if I say for the last [17] period of time — I assume we'll see a number like [18] a dozen or so?

[19] **A:** I'm not sure what kind of records we keep [20] on them. I can certainly come up with examples. I [21] don't know if we've got good enough records that I [22] would say that this is an exhaustive search of all [23] the ones that have occurred.

[24] **Q:** Do your best. Thank you.

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[1] **(RECORD REQUEST AMENDMENT.)**

[2] **MS. EVANS:** One followup: Has Bell [3] Atlantic upgraded the RMAS system recently?

[4] **THE WITNESS:** I don't know what time [5] frame. The RMAS system, like other operations [6] systems, has different loads of software that are [7] developed and become available for it. When was [8] the last of those I'm not aware of.

[9] **MR. LEVY:** Mr. Jones, did you have [10] another one?

[11] **MR. JONES:** Could I ask a couple that [12] have occurred to me listening to this?

[13] **MR. LEVY:** Sure.

[14] **CROSS-EXAMINATION**

[15] **BY MR. JONES:**

Q: Mr. Albert, I think you said that somehow by permitting CLEC access to recent-change functionality it would double the number of recent-change orders flowing through the system. Did I hear that?

A: Recent-change messages that you'd have for an order. You basically would have one recent-change message if Bell Atlantic was doing it. If you were having the CLEC turn the final

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dial tone on, then you'd have a Bell Atlantic message for setting up all the features and the classes of service. You'd have then that second CLEC message to say turn the dial tone on.

Q: Let's assume we have a flow-through scenario. We have a Bell Atlantic - Massachusetts customer out there in the box behind Mr. Beausejour's head now — this will really look good on the record — and that customer terminates service. Bell Atlantic's order-taker makes an entry at the keyboard which, among other things, sends a recent-change message through ultimately to the switch to take dial tone off of that customer's loop. Are you with me?

A: Okay.

Q: And maybe leaves on soft dial tone. For my purposes it doesn't matter. So that's one recent-change order that went through the recent-change system; correct? To terminate that customer's service.

A: Yes. And to be precise, let's narrow it and say it's a residential order and it's POTS service. You get the more complicated orders, there are going to be more than one recent-change

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message that you need to activate then.

Q: We're talking as simple as you can talk here.

A week later a new customer moves into the same premises, orders service from Bell Atlantic. The Bell Atlantic order-taker — and it's POTS service — and the Bell Atlantic order-taker makes the entry and everything flows through the OSS's, including one recent-change message that flows through to the switch and says, "Turn that loop back on with dial-tone." Correct?

A: All right, correct.

Q: So we've had a recent-change message to turn the service off, and we've had a recent-change message to turn the service back on; right?

A: Right.

Q: Same scenario: Your customer has moved out. You've turned the system off with a single recent-change message. A new customer moves in and orders service from AT&T, and AT&T's order-taker has the miracle of direct access, through either MACSTAR/CCRS or directly through RMAS, has direct access into the recent-change system. AT&T sends

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the same new-service order through those systems, and the switch turns that customer's service back on. Correct?

A: Are we — are you going to be doing recombining now?

Q: I haven't done anything other than have a Bell Atlantic customer move out and have Bell Atlantic turn the service off. A new customer who decides to be a CLEC customer comes back in — and the CLEC has direct access to the recent-change functionality. If that's the scenario, the CLEC can order up the service for that new customer, the POTS service, by sending a recent-change message through to the switch; right?

A: The way I think it would have to work is, Bell Atlantic would have to do the recent-change message to put the features on the line and to establish the classes of service. I thought what we were talking about with this new creation is that then the CLEC would actually put the dial tone on the line to activate it, which would be then the second message.

Q: So we're talking at least about two different kinds of access to the recent-change. I

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mean, in theory, at least, a CLEC could have access to the recent-change functionality both to turn on dial tone and to add features to the line; correct?

A: In theory you could develop probably just about anything.

Q: But my customer doesn't have any features. My customer is just a plain-old-telephone-service customer. And if that's all that needs to be done and the CLEC has access to the recent-change functionality, only one recent-change message needs to get sent through to the switch. Is that correct?

A: No. You still need to change the class of service. If you're providing that as an unbundled switch port, which you would be in this case, you still have to set the class of service that way. That's established still through a recent-change message that looks like a feature message.

Q: And in order to establish that class of service, a recent-change message has to be sent through to the switch in order to do that?

A: Yes.

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Q: That's not just a billing function?

A: No, that's setting the class of service in the switch. When I'm talking class of service, that's basically a defined set of parameters within the switch that further defines characteristics of that switch port. It does it in common. There will be a number of services that have the same class of service — flat-rate residence, measured business. But it still sets and specifies a number of parameters in common for those ports.

Q: And is that a signal message that has to get sent through when it's a new Bell Atlantic customer signing up for service?

A: That's why I said, if you take the very, very simplistic case of let's have a residence and let's have, you know — don't get exotic with the features, and have it be POTS — there's usually one recent-change message to establish that: Put the telephone number on it.

Q: That's in the case of a new Bell Atlantic customer.

A: Yes.

Q: And you're telling us that if the new customer is a CLEC customer ordering exactly the

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same service, there are two recent-change messages.

A: That's because — that's correct, because I think the process that we had described here was, Bell Atlantic builds the unbundled switching in the switch, and then the CLEC, to do the combining and the cutover, comes along and turns the dial tone on. That's the description I thought that we were basically working with here.

Q: No, no, no. Mr. Albert, I'm just trying to get at a very simple scenario. The only thing that's changed from what exists today is that the CLEC has direct access to your recent-change system, and the CLEC wants to turn on POTS service for this customer. As things exist today, if the CLEC has direct access to the recent-change methodology, isn't it true that it does that with a single recent-change message through to the switch, the same as Bell Atlantic?

A: Maybe I'm getting a little lost, because we're hypothesizing here about what would be created and what would be developed. If we're saying for the CLEC —

you do things [2] in there that have an effect on further downstream [3] systems, I think that basically just happens in the [4] bulk of the security at that very head end, the [5] point of access.

[6] **Q:** So once I'm in, I'm in; is that correct?

[7] **A:** Yes, I think for the most part. And [8] again, that's not my particular in-depth area of [9] expertise. But if you want a generalization, I [10] think that applies.

[11] **Q:** I'd like to make a record request, [12] please. This has to do with the RMAS system and [13] what we were discussing before regarding recent [14] changes to the RMAS system. Could the company [15] identify and describe the changes-slash-upgrades to [16] the RMAS system made by the company or by the [17] company's vendors in the past two years. I'd also [18] like a dollar figure on the size of the change, [19] cost of the change.

[20] **A:** This will be upgrades from the vendors?

[21] **Q:** Any types of upgrades, whether it's done [22] by the company or by the company's vendors.

[23] **A:** Okay.

[24] **MR. LEVY:** That will be Record

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[1] Request 18.

[2] **(RECORD REQUEST.)**

[3] **MR. LEVY:** Redirect?

[4] **MR. BEAUSEJOUR:** Nothing.

[5] **MS. BARBULESCU:** I'd like to make one [6] additional record request. If I may, I'd like to [7] request that Bell Atlantic provide any data to [8] demonstrate whether or not Bell Atlantic in any of [9] its states that it's currently serving today, North [10] or South, uses any kind of loop-concentration [11] equipment in its network.

[12] **MR. LEVY:** Fine. That will be Record [13] Request 19.

[14] **(RECORD REQUEST.)**

[15] **MR. LEVY:** Thank you for your ten [16] minutes, Mr. Albert.

[17] **MR. BEAUSEJOUR:** I had ten minutes, [18] Mr. Levy.

[19] **MR. LEVY:** Are there other witnesses [20] in rebuttal at this point, or are we finished for [21] the day here, for either AT&T or MCI?

[22] **MS. BARBULESCU:** No. I have an [23] administrative item, though. We have not yet [24] received responses to the record requests that were

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[1] asked at the hearing two weeks ago.

[2] **MR. BEAUSEJOUR:** That's correct.

[3] **MS. BARBULESCU:** I wondered if there [4] was any update on when we will receive those?

[5] **MR. BEAUSEJOUR:** I believe by next [6] Wednesday.

[7] **MR. LEVY:** Thank you.

[8] I think the next order of business is [9] a briefing schedule. First, as I see it, the main [10] item for briefing at this point in the hearing, in [11] the consolidated arbitrations, is the following [12] question: Are Bell Atlantic's proposals with [13] regard to UNE combinations consistent with the [14] Department's March 13th order, and are there [15] alternative proposals which, while consistent with [16] the Department's order, might serve to better [17] accomplish the goals of the Act?

[18] **MR. BEAUSEJOUR:** While consistent [19] with the Department's order?

[20] **MR. LEVY:** Yes. [21] To me, that's the main question [22] before us. I would please ask the parties in [23] addressing that question to not reargue the issues [24] that were decided in the Department's previous

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[1] order.

[2] **MR. JONES:** On the responses to [3] record requests: Next Wednesday, including [4] today's?

[5] **MR. BEAUSEJOUR:** No, not today's, [6] most likely. But we'll try to expedite the [7] responses to today's.

[8] **MR. JONES:** Those are relevant to our [9] approach to briefing.

[10] **MR. LEVY:** Of course.

[11] **MR. JONES:** I'd like at least not to [12] today waive the possibility of having some limited [13] further interrogation. We will do everything we [14] can to avoid it; but not knowing what the responses [15] will contain....

[16] **MR. LEVY:** I anticipated that [17] request. I'm pleased you made it, because I was [18] going to mention it anyway.

[19] Assuming a week and a half or so for [20] information responses today?

[21] **MR. BEAUSEJOUR:** I was just told that [22] it's a big job. Can I report back next Tuesday on [23] the time frame?

[24] **MR. LEVY:** Let's do this.

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[1] **WITNESS ALBERT:** MCI's we can get [2] pretty fast. So I think it's no, there's nothing [3] out there.

[4] **MS. BARBULESCU:** But I'd like you to [5] check.

[6] **MR. LEVY:** On the assumption that the [7] record requests are responded to two weeks from [8] today, and on the further assumption that no [9] further questioning is needed of the witnesses in [10] response to those record requests, I'd like to set [11] a briefing schedule for the initial briefs to be [12] due two weeks from that day — in other words, four [13] weeks from today — and reply briefs a week after [14] that.

[15] In the event there's a delay in the [16] response, we'll just push the briefing schedule [17] back day for day for each day of delay in response [18] to the record requests. Likewise, if we need to [19] hold another hearing, we'll reschedule all the [20] briefing at that point.

[21] Any questions, comments?

[22] **MR. JONES:** Maybe I just missed it. [23] Did you say anything about reply briefs?

[24] **MR. LEVY:** A week after. So absent

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[1] any changes, I'm anticipating briefs four weeks [2] from today, reply briefs five weeks from today. If [3] there's a delay in record responses, we'll have a [4] day-for-day delay in the briefing schedule, [5] allowing two weeks for the initial briefs from that [6] time and a week for the reply briefs from that.

[7] Anything else for today? You [8] probably all know what the other scheduled items [9] are. I'm waiting to hear from the CLECs as to when [10] they wish to begin the proceeding on dark-fiber [11] pricing.

[12] **MS. BARBULESCU:** Whenever.

[13] **MR. JONES:** I personally can't wait.

[14] (Laughter.)

[15] **MR. LEVY:** I actually think it was [16] Mr. Gruber for AT&T who was working on that when I [17] last raised the issue. I don't know if MCI was [18] going to pursue it.

[19] **MS. BARBULESCU:** We're pursuing it.

[20] **MR. LEVY:** And I think Teleport had [21] some interest in that, also. So if you could let [22] me know your schedule on that, I'd appreciate it.

[23] Thank you all very much for coming [24] today. I look forward to seeing you soon.

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(2:35 p.m.)

CERTIFICATE

I, Alan H. Brock, Registered Professional Reporter, do hereby certify that the foregoing transcript is a true and accurate transcription of my stenographic notes taken on May 15, 1998.

Alan H. Brock
Registered Professional Reporter

[24] Q: The only thing that would be created

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[1] would be CLEC access to the recent-change systems [2] as they exist today, no other change, no [3] reprogramming of the switch. I'm trying to do this [4] one little piece at a time. If that's the only [5] thing that's changed, when the CLEC sends the [6] recent-change message through to turn on POTS [7] service for that new customer, all that's required [8] is a single recent-change message in that [9] scenario?

[10] A: No, you're still having the CLEC turn the [11] dial tone on and Bell Atlantic is doing all of the [12] other features in the class of service. So there's [13] one message to do the features in the class of [14] service in the simple and then there's another [15] message to turn the dial tone on. If you're [16] talking about another hypothesized environment [17] where the CLEC would go in and it would do all [18] recent-change capabilities and change all features [19] and add them on all — sure, you could maybe look [20] at that and develop that, but that's even an order [21] of magnitude more complicated than just to have [22] access to turn dial tone on and off.

[23] Q: The recent-change functionality could be [24] made available to CLECs in its entirety, with

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[1] whatever time and expense is required to do the [2] development. Isn't that correct?

[3] A: It gets back to technically, if you can, [4] time and money, put a man on the moon, yes, you [5] could probably figure out some way to do that, [6] too.

[7] MR. JONES: I have no further [8] questions.

[9] MR. LEVY: Ms. Barbulescu?

[10] CROSS-EXAMINATION

[11] BY MS. BARBULESCU:

[12] Q: You mentioned that there were a lot of [13] security issues with respect to this recent- [14] change.

[15] A: Yes.

[16] Q: There would be none of these additional [17] security issues, would there, if Bell Atlantic did [18] the combinations itself?

[19] A: You mean if Bell Atlantic in the [20] pre-Eighth Circuit mode did the combining?

[21] Q: If Bell Atlantic today decided it wanted [22] to combine the elements for CLECs, yes.

[23] A: That's correct.

[24] Q: Thank you. You also mentioned that Bell

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[1] Atlantic doesn't use any kind of loop-concentration [2] equipment in Massachusetts; isn't that correct?

[3] A: That's correct.

[4] Q: Is there anyplace in Bell Atlantic's [5] footprint in all of the Bell Atlantic North and [6] South states that it uses any kind of loop [7] concentration whatsoever?

[8] A: No, not that I'm aware of.

[9] Q: Not that you're aware of, or no?

[10] A: Not that I'm aware of.

[11] MS. BARBULESCU: Thank you very [12] much.

[13] EXAMINATION

[14] BY MS. EVANS:

[15] Q: I had a couple of questions regarding the [16] security problem that you identified. First of [17] all, in the MACSTAR and the CCRS systems is there [18] some sort of security that prevents one set of [19] Centrex customers from changing another set of [20] Centrex customers' features?

[21] A: Yes. The way the system is set up is [22] that it very specifically identifies, these are the [23] switch ports in this Centrex system that that user [24] through that terminal can go in and make changes

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[1] to.

[2] Q: Do they also have to log in with some [3] sort of authorization code or something like that?

[4] A: Yes.

[5] Q: Does the MACSTAR or CCRS system have a [6] way of recognizing the terminal that's talking to [7] it as being the right one to access features on [8] those particular lines?

[9] A: I don't know. I'm not sure in that level [10] if that's built into it or not.

[11] Q: You said there were also some security [12] provisions in the RMAS system. I thought you had [13] mentioned that there was some level of security in [14] the RMAS system, also.

[15] A: The RMAS gets involved with what [16] different types of things is that MACSTAR [17] arrangement allowed to do, what kind of messages to [18] what types of lines can you get from it. It's kind [19] of a police or a traffic cop of what is coming into [20] it from the MACSTAR system. There's a check: Is [21] that MACSTAR system allowed to touch this line?

[22] Q: And that resides in the RMAS system, that [23] information?

[24] A: Yes. And I'm not sure — I'm not aware

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[1] of the complete depth of each one of the functions, [2] but there are further ones of that nature [3] involved.

[4] Q: Now, I believe you testified before that [5] there's a variety of OSS's that connect to the RMAS [6] system; is that correct?

[7] A: No. The main input is the service [8] orders. There are a number of provisioning systems [9] that do other provisioning functions. Like RMAS [10] does the recent-change functions, there are other [11] provisioning functions that do functions associated [12] with the loop. Those other provisioning systems [13] also tie into the ordering system.

[14] Q: And where would those other provisioning [15] systems appear in this diagram, connected to what?

[16] A: It's probably best represented that [17] they're within here. And it relates to when an [18] order flows, you know, which — not all orders go [19] through all provisioning systems. It depends on [20] the type of the order. But again, depending on the [21] type of the order, sometimes it will flow serially [22] through several systems, but other times it will [23] flow in parallel.

[24] It really all gets back to the type

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[1] of the order and what's being provisioned and [2] what's required. You know, nonswitched orders take [3] different paths and different routes than switched [4] orders. FX kind of hits things that look both like [5] a switched and a nonswitched. So the systems that [6] it flows through and somewhat the sequencing gets [7] driven by the type of the order, what's being [8] requested by the customer.

[9] Q: Is there any security such that one of [10] the provisioning or OSS systems cannot change what [11] another system is doing? In other words, is there [12] any — how do I put this? Are there any systems [13] that stop one group of Bell Atlantic employees from [14] doing something that another group of Bell Atlantic [15] employees can do?

[16] A: I really don't know. Are you talking [17] different levels of overrides within the same [18] system or....

[19] Q: I'm talking about, if I happen to be —

[20] A: If you mean are there different systems, [21] say, like in the flow and if you access the flow at [22] a different point and do something, is there [23] another check further down the flow? I don't think [24] so. I think you pass the main security to get in

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[1] the system that you're accessing. If